



Lancaster Laboratories
Environmental

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Analysis Report

Partial Report

Sample Description: **Ex. 6 - Personal Privacy**

Tetra Tech, Inc.
ELLE Sample #:
ELLE Group #:
Matrix: Water

Ex. 6 - Personal Privacy

Project Name: **Wolverine World Wide Tannery**

Submittal Date/Time: 12/29/2017 10:00
Collection Date/Time: 12/27/2017 17:23
SDG#: **Ex. 6 - Personal Privacy**

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
14070	NEtFOSAA	2991-50-6	N.D.	2	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA	2355-31-9	N.D.	2	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonate	375-73-5	N.D.	2	1
14070	Perfluorodecanoic acid	335-76-2	N.D.	2	1
14070	Perfluorododecanoic acid	307-55-1	N.D.	2	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	2	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	2	1
14070	Perfluorohexanoic acid	307-24-4	N.D.	2	1
14070	Perfluorononanoic acid	375-95-1	N.D.	2	1
14070	Perfluoro-octanesulfonate	1763-23-1	10	2	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	2	1
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	3	1
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	2	1
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	2	1

The recovery for PFTeDA and PFHxS in the laboratory fortified blank duplicate (LFBD) is outside of QC acceptance limits as noted on the QC Summary. The data reported should be considered preliminary as this sample will be re-extracted.

The recovery for internal standard d5-NEtFOSAA is outside of QC acceptance limits. Since native compounds NMeFOSAA and NEtFOSAA are not detected, the data is reported.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18003005	01/08/2018 04:31	Marissa C Drexinger	1
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18003005	01/10/2018 18:24	Marissa C Drexinger	1

Sample Description: **Ex. 6 - Personal Privacy**

Wolverine World Wide

Tetra Tech, Inc.
ELLE Sample #:
ELLE Group #:
Matrix: Water

Ex. 6 - Personal Privacy

Project Name: **Wolverine World Wide Tannery**

Submittal Date/Time: 12/29/2017 10:00
Collection Date/Time: 12/27/2017 18:23
SDG#: **Ex. 6 - Personal Privacy**

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
14070	NEtFOSAA	2991-50-6	N.D.	20	10

Reference ID:
1891712170118105505



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Analysis Report

Partial Report

Sample Description:

Ex. 6 - Personal Privacy

Wolverine World Wide

Tetra Tech, Inc.
ELLE Sample #:
ELLE Group #:
Matrix: Water

Ex. 6 - Personal Privacy

Project Name:

Wolverine World Wide Tannery

Submittal Date/Time: 12/29/2017 10:00

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Ex. 6 - Personal Privacy

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA	2355-31-9	N.D.	20	10
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonate	375-73-5	69	20	10
14070	Perfluorodecanoic acid	335-76-2	N.D.	20	10
14070	Perfluorododecanoic acid	307-55-1	N.D.	20	10
14070	Perfluoroheptanoic acid	375-85-9	120	20	10
14070	Perfluorohexanesulfonate	355-46-4	480	20	10
14070	Perfluorohexanoic acid	307-24-4	63	20	10
14070	Perfluorononanoic acid	375-95-1	N.D.	20	10
14070	Perfluoro-octanesulfonate	1763-23-1	7,100	2,000	1000
14070	Perfluorooctanoic acid	335-67-1	1,600	200	100
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	30	10
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	20	10
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	20	10

The recovery for PFTeDA and PFHxS in the laboratory fortified blank duplicate (LFBD) is outside of QC acceptance limits as noted on the QC Summary. The data reported should be considered preliminary as this sample will be re-extracted.

Reporting limits were raised due to interference from the sample matrix.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18003005	01/08/2018 09:54	Marissa C Drexinger	10
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18003005	01/08/2018 10:05	Marissa C Drexinger	100
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18003005	01/09/2018 23:26	Marissa C Drexinger	1000

Reference ID:
1891712170118105505

Environmental Analysis Request/Chain of Custody



**Lancaster Laboratories
Environmental**

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 10459 Group # 1891712 Sample # 9388817-45

COC # 540829

Client Information				Matrix				Analysis Requested												For Lab Use Only					
Client:		Acct. #:		<input type="checkbox"/> Tissue <input type="checkbox"/> Ground <input type="checkbox"/> Surface		<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable NPDES		<input type="checkbox"/> Soil <input type="checkbox"/> Water Other:		Total # of Containers		Preservation Codes												FSC: _____	
Project Name/ #:		PWSID #:										0												SCR#: _____	
Project Manager:		P.O. #:		<input type="checkbox"/> NPDES		<input type="checkbox"/> NPDES		<input type="checkbox"/> NPDES		<input type="checkbox"/> NPDES		<input type="checkbox"/> NPDES		<input type="checkbox"/> NPDES		<input type="checkbox"/> NPDES		<input type="checkbox"/> NPDES		Preservation Codes					
Sampler:		Quote #:																		H=HCl		T=Thiosulfate			
State where samples were collected:		For Compliance:		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Remarks					
Sample Identification		Collected																		Date		Time		Grab	
Ex. 6 - Personal Privacy		12/17		0835		X						1		X											
				0838		X						2		X											
				0854		X						2		X											
				0946		X						1		X											
				0950		X						2		X											
				0955		X						6		X											
				1054		X						1		X											
				1057		X						2		X											
		1102		X						2		X													
Turnaround Time (TAT) Requested (please circle)				Relinquished by				Date		Time		Received by				Date		Time							
Standard				Rush				12-21-17				2000													
(Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by				Date		Time		Received by				Date		Time							
Date results are needed: 5-DAY				Relinquished by				Date		Time		Received by				Date		Time							
E-mail address: britchier@mamichsullivangroup.com				Relinquished by				Date		Time		Received by				Date		Time							
Data Package Options (circle if required)				Relinquished by				Date		Time		Received by				Date		Time							
Type I (EPA Level 3 Equivalent/non-CLP)				Type VI (Raw Data Only)				Date		Time		Received by				Date		Time							
Type III (Reduced non-CLP)				Level IV				Date		Time		Received by				Date		Time							
NYSDEC Category A or B				NJ DKQP TX TRRP-13				Date		Time		Received by				Date		Time							
MA MCP CT RCP				EDD Required? Yes No				Date		Time		Received by				Date		Time							
				If yes, format: _____				Date		Time		Received by				Date		Time							
				Site-Specific QC (MS/MSD/Dup)? Yes No				Date		Time		Received by				Date		Time							
				(If yes, indicate QC sample and submit triplicate sample volume.)				Date		Time		Received by				Date		Time							
				Relinquished by Commercial Carrier:				Date		Time		Received by				Date		Time							
				UPS _____ FedEx X Other _____				Date		Time		Received by				Date		Time							
				Temperature upon receipt 0.4/1.0 °C				Date		Time		Received by				Date		Time							

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The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0216

Environmental Analysis Request/Chain of Custody



**Lancaster Laboratories
Environmental**

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 10459 Group # 1891712 Sample # 9388817

COC # 540830

Client Information				Matrix				Analysis Requested												For Lab Use Only													
Client: MSG/Tetra Tech			Acct. #:	<input type="checkbox"/> Tissue <input type="checkbox"/> Ground <input type="checkbox"/> Surface			Total # of Containers	Preservation Codes												FSC: _____ SCR#: _____													
Project Name/#: Wolverine World Wide			PWSID #:	<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES																													
Project Manager: BRENT RITCHIE			P.O. #: 217808	<input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Other:																													
Sampler: BLR/C. Renner			Quote #:																														
State where samples were collected: MI		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Sample Identification		Collected		Grab		Composite																							
				Date	Time																												
				12-27-17	1156	X						1	X																				
					1202	X						2	X																				
					1207	X						2	X																				
					1207	X						2	X																				
					1250	X						1	X																				
					1253	X						2	X																				
					1258	X						2	X																				
					1438	X						1	X																				
					1440	X						2	X																				
				✓	1445	X						2	X																				

Turnaround Time (TAT) Requested (please circle)		Relinquished by		Date		Time		Received by		Date		Time	
Standard <input type="radio"/> Rush <input checked="" type="radio"/>				12-29-17		200							
(Rush TAT is subject to laboratory approval and surcharge.)		Relinquished by		Date		Time		Received by		Date		Time	
Date results are needed: 5-day		Relinquished by		Date		Time		Received by		Date		Time	
E-mail address: britchie@mannixsmithgroup.com		Relinquished by		Date		Time		Received by		Date		Time	
Data Package Options (circle if required)		Relinquished by		Date		Time		Received by		Date		Time	
Type I (EPA Level 3 Equivalent/non-CLP)	Type VI (Raw Data Only) Level IV									12/29/17		1000	
Type III (Reduced non-CLP)	NJ DKQP TX TRRP-13												
NYSDEC Category A or B	MA MCP CT RCP												
EDD Required? Yes No		Relinquished by Commercial Carrier:											
If yes, format: _____		UPS _____ FedEx X Other _____											
Site-Specific QC (MS/MSD/Dup)? Yes No		Temperature upon receipt 1.3 °C											
(If yes, indicate QC sample and submit triplicate sample volume.)													

Environmental Analysis Request/Chain of Custody



**Lancaster Laboratories
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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 10459 Group # 1891712 Sample # 9388817-45

COC # 540817

[illegible]

Environmental Analysis Request/Chain of Custody



**Lancaster Laboratories
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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 10459 Group # 1891712 Sample # 9388817-45

COC # 540816

[illegible]



Lancaster Laboratories
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Sample Administration Receipt Documentation Log

Doc Log ID: 205017



Group Number(s): 1891712

Client: MSG/TETRA TECH

Delivery and Receipt Information

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>12/29/2017 10:00</u>
Number of Packages:	<u>4</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>MI</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wendy Wakeley (1669) at 11:06 on 12/29/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	3.6	DT	Wet	Y	Bagged	N
2	DT146	1.3	DT	Wet	Y	Bagged	N
3	DT146	0.4	DT	Wet	Y	Bagged	N
4	DT146	1.0	DT	Wet	Y	Bagged	N



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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m3	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.